

REMARKS

Claims 11 and 21 are Allowable

The Office has rejected claims 11, 14 and 21 under 35 U.S.C. §102 (e), as anticipated by U.S. Patent No. 7,425,984 ("Chen"). See Office Action, p. 2. Claim 14 is cancelled without prejudice or disclaimer. Applicants respectfully traverse the remainder of the rejections.

The cited portions of Chen do not disclose or suggest the specific combination of claim 11. For example, the cited portions of Chen do not disclose or suggest a selector operable to select between first image information from a first image module and second image information from a second image module in response to a processing engine identifying which of the first image information and the second image information comprises desired information and to selectively deliver the identified desired information to the processing engine, as in claim 11.

In contrast to claim 11, Chen discloses a compound camera with component cameras at different locations and with different viewing angles. The views of the component cameras are combined to create a virtual image with increased resolution. Chen, col. 9, ll. 35-45. Chen also describes a video processor to emulate various depths of field to provide a plurality of virtual images, each virtual image having a higher resolution. Chen, col. 8, ll. 1-10 and col. 8, ll. 50-60. Chen also discloses that component image sensors and a video processor can be integrated onto one printed circuit board or onto a single integrated circuit. Chen, col. 5, ll. 15-20. Chen does not disclose a selector operable to select between first image information from a first image module and second image information from a second image module in response to a processing engine identifying which of the first image information and the second image information comprises desired information and to selectively deliver the identified desired information to the processing engine. Hence, claim 11 is allowable. Claim 21 is allowable, at least by virtue of its dependence from claim 11.

Claims 12, 15 and 19 are Allowable

The Office has rejected claims 12, 15 and 19 under 35 U.S.C. §103 (a), as being unpatentable over Chen. See Office Action, p. 4. Applicants respectfully traverse the rejections.

Claims 12, 15, and 19 are allowable, at least by virtue of their dependence on claim 11.

Claims 17-18 are Allowable

The Office has rejected claims 17-18 and 32-33 under 35 U.S.C. §103 (a), as being unpatentable over Chen, in view of U.S. Patent No. 7,015,954 ("Foote"). See Office Action, p. 6. Claims 32 and 33 are cancelled without prejudice or disclaimer. Applicants respectfully traverse the remainder of the rejections.

Claims 17-18 depend from claim 11. The cited portions of Chen do not disclose or suggest at least one element of claim 11. The cited portions of Foote fail to disclose or suggest the elements of claim 11 not disclosed or suggested by the cited portions of Chen. For example, the cited portions of Foote fail to disclose or suggest a selector operable to select between first image information from a first image module and second image information from a second image module in response to a processing engine identifying which of the first image information and the second image information comprises desired information and to selectively deliver the identified desired information to the processing engine, as in claim 11. In contrast to claim 11, Foote discloses steering a virtual camera to "interesting locations" as determined from sensors that capture audio and motion. Foote discloses image selection based on audio or motion analysis. Foote, col. 4, ll. 5-20. Foote also discloses detecting motion or audio in a particular region and pointing a camera toward the particular region. Foote, col. 12, ll. 10-35, col. 15, ll. 1-10. Foote also discloses combining images of a camera array, storing the combined image in memory, and selecting a part of the combined image for display. Foote, col. 18, ll. 15-22. Thus, Foote discloses steering a virtual camera or pointing a camera to a particular region, but the cited portions of Foote do not disclose or suggest a selector operable to select between first image information from a first image module and second image information from a second image module in response to a processing engine identifying which of the first image information and the second image information comprises desired information and to selectively deliver the identified desired information. Therefore, the cited portions of Chen and Foote fail to disclose or suggest at least one element of claim 11, from which claims 17-18 depend. Hence, claims 17-18 are allowable.

Claim 34 is Allowable

The Office has rejected claim 34 under 35 U.S.C. §103 (a), as being unpatentable over Chen, in view of U.S. Patent No. 6,791,076 ("Webster"). See Office Action, p. 10. Applicants

respectfully traverse the rejection.

Claim 34 depends from claim 11. As explained above, the cited portions of Chen do not disclose or suggest at least one element of claim 11. The cited portions of Webster fail to disclose or suggest the elements of claim 11 not disclosed or suggested by the cited portions of Chen. For example, the cited portions of Webster fail to disclose or suggest a selector operable to select between first image information from a first image module and second image information from a second image module in response to a processing engine identifying which of the first image information and the second image information comprises desired information and to selectively deliver the identified desired information to the processing engine, as in claim 11. In contrast to claim 11, Webster discloses that a lens may be rotated to adjust focus and that the lens and an image sensor can be integrated into the same package. Webster, col. 4, l. 65-col. 5, l. 10. The cited portions of Webster do not disclose or suggest a selector operable to select between first image information from a first image module and second image information from a second image module in response to a processing engine identifying which of the first image information and the second image information comprises desired information and to selectively deliver the identified desired information to the processing engine. Therefore, the cited portions of Chen and Webster fail to disclose or suggest at least one element of claim 11, from which claim 34 depends. Hence, claim 34 is allowable, at least by virtue of its dependence from claim 11.

Claims 1, 3-4, 6, 23, 25-27 and 35-38 are Allowable

The Office has rejected claims 1, 3-6, 23, 25-27 and 35-38, under 35 U.S.C. §103 (a), as being unpatentable over Chen, in view of Webster. See Office Action, p. 10. Claim 5 is cancelled without prejudice or disclaimer. Applicants respectfully traverse the remaining rejections.

The cited portions of Chen and Webster do not disclose or suggest the specific combination of claim 1. For example, the cited portions of Chen and Webster fail to disclose or suggest a triggering engine operable to evaluate scene view information to identify which of first information and second information comprises desired information and causing the selector to select and route the identified desired information to the processing engine, as in claim 1.

In contrast to claim 1, Chen discloses a compound camera with component cameras at different locations and with different viewing angles. The views of the component cameras are combined to create a virtual image with increased resolution. Chen, col. 9, ll. 35-45. Chen also describes a video processor to emulate various depths of field to provide a plurality of virtual images, each virtual image having a higher resolution. Chen, col. 8, ll. 1-10 and col. 8, ll. 50-60. Chen also discloses that component image sensors and a video processor can be integrated onto one printed circuit board or onto a single integrated circuit. Chen, col. 5, ll. 15-20. Thus, Chen discloses emulating various depths of field to provide a plurality of virtual images, but the cited portions of Chen do not disclose or suggest a triggering engine operable to evaluate scene view information to identify which of first information and second information comprises desired information and causing the selector to select and route the identified desired information to the processing engine, as in claim 1.

In further contrast to claim 1, Webster discloses that a lens may be rotated to adjust focus and that the lens and an image sensor can be integrated into the same package. Webster, col. 4, l. 65-col. 5, l. 10. The cited portions of Webster fail to disclose or suggest a triggering engine operable to evaluate scene view information to identify which of first information and second information comprises desired information and causing the selector to select and route the identified desired information to the processing engine, as in claim 1.

Therefore, the cited portions of Chen and Webster, individually or in combination, fail to disclose or suggest the specific combination of claim 1. Hence, claim 1 is allowable. Claims 3-4, 6, and 35-38 are allowable, at least by virtue of their dependence from claim 1.

The cited portions of Chen and Webster do not disclose or suggest the specific combination of claim 23. For example, the cited portions of Chen and Webster fail to disclose or suggest determining between first information obtained from a first digital image sensor and second information obtained from a second digital image sensor which of the first information and the second information comprises a desired portion of a scene, and selecting the determined desired portion of the scene to be delivered to a processing engine, as in claim 23.

In contrast to claim 23, Chen discloses a compound camera with component cameras at different locations and with different viewing angles. The views of the component cameras are

combined to create a virtual image with increased resolution. Chen, col. 9, ll. 35-45. Chen also describes a video processor to emulate various depths of field to provide a plurality of virtual images, each virtual image having a higher resolution. Chen, col. 8, ll. 1-10 and col. 8, ll. 50-60. Chen also discloses that component image sensors and a video processor can be integrated onto one printed circuit board or onto a single integrated circuit. Chen, col. 5, ll. 15-20. Thus, Chen discloses emulating depths of field and combining the images captured by multiple cameras. The cited portions of Chen fail to disclose or suggest determining between first information obtained from a first digital image sensor and second information obtained from a second digital image sensor which of the first information and the second information comprises a desired portion of a scene, and selecting the determined desired information to be delivered to a processing engine, as in claim 23.

In further contrast to claim 23, Webster discloses that a lens may be rotated to adjust focus and that the lens and an image sensor can be integrated into the same package. Webster, col. 4, l. 65-col. 5, l. 10. . The cited portions of Webster fail to disclose or suggest determining between first information obtained from a first digital image sensor and second information obtained from a second digital image sensor which of the first information and the second information comprises a desired portion of a scene, and selecting the determined desired portion of the scene to be delivered to a processing engine, as in claim 23.

Therefore, the cited portions of Chen and Webster, individually or in combination, fail to disclose or suggest the specific combination of claim 23. Hence, claim 23 is allowable. Claims 25-27 are allowable, at least by virtue of their dependence from claim 23.

Claim 2 is Allowable

The Office has rejected claim 2, under 35 U.S.C. §103 (a), as being unpatentable over Chen and Webster, in view of U.S. Patent No. 5,920,337 ("Glassman"). See Office Action, p. 17. Applicants respectfully traverse the rejection.

Claim 2 depends from claim 1. As explained above, the cited portions of Chen and Webster do not disclose or suggest at least one element of claim 1. The cited portions of Glassman fail to disclose or suggest the elements of claim 1 not disclosed or suggested by the cited portions of Chen and Webster. For example, the cited portions of Glassman fail to disclose

or suggest a triggering engine operable to evaluate scene view information to identify which of first information and second information comprises desired information and causing the selector to select and route the identified desired information to a processing engine, as in claim 1. In contrast to claim 1, Glassman discloses that both lens and sensor can be formed on a substrate using integrated circuit fabrication techniques and that the lenses can be arranged in a cylindrical distribution. Glassman, col. 10, l. 65-col. 11, l. 5. This is not the same as a triggering engine operable to evaluate scene view information to identify which of first information and second information comprises desired information and causing the selector to select and route the identified desired information to a processing engine, as in claim 1. Therefore, the cited portions of Chen, Webster and Glassman fail to disclose or suggest at least one element of claim 1, from which claim 2 depends. Hence, claim 2 is allowable.

Further, claim 2 recites additional elements not disclosed or suggested by the cited portions of Chen, Webster, and Glassman. For example, claim 2 recites a support having an exterior surface that comprises the mounting surface, the support having a generally spherical geometry. This is not disclosed by the cited portions of Chen, Webster and Glassman. Chen, FIG. 2, and Webster, FIG. 1, disclose a planar rectangular array of lenses. Glassman, FIG. 10, discloses a set of lenses in a planar cylindrical distribution. The cited portions of Chen, Webster, and Glassman do not disclose or suggest a support having an exterior surface that comprises the mounting surface, the support having a generally spherical geometry, as in claim 2. For at least this additional reason, claim 2 is allowable.

Claims 28-29 and 31 are Allowable

The Office has rejected claims 28-29 and 31, under 35 U.S.C. §103 (a), as being unpatentable over Chen and Webster, in view of U.S. Patent No. 6,987,258 ("Mates"). See Office Action, p. 18. Applicants respectfully traverse the rejections.

Claim 28-29 and 31 depend from claim 23. As explained above, the cited portions of Chen and Webster do not disclose or suggest at least one element of claim 23. The cited portions of Mates fail to disclose or suggest the elements of claim 23 not disclosed or suggested by the cited portions of Chen and Webster. For example, the cited portions of Mates fail to disclose or suggest determining between first information obtained from a first digital image sensor and

second information obtained from a second digital image sensor which of the first information and the second information comprises a desired portion of a scene, and selecting the determined desired portion of the scene to be delivered to a processing engine, as in claim 23. In contrast to claim 23, Mates discloses a plurality of photo detector elements in an integrated circuit, a micro lens array and "image integration circuitry." Mates, col. 2, ll. 55-65, col. 3, ll. 20-25, and col. 4, ll. 30-40. The cited portions of Mates do not disclose or suggest determining between first information obtained from a first digital image sensor and second information obtained from a second digital image sensor which of the first information and the second information comprises a desired portion of a scene, and selecting the determined desired portion of the scene to be delivered to a processing engine, as in claim 23. Therefore, the cited portions of Chen, Webster and Mates fail to disclose or suggest at least one element of claim 1, from which claims 28-29 and 31 depend. Hence, claims 28-29 and 31 are allowable.

Claim 8 is Allowable

The Office has rejected claims 7-8, under 35 U.S.C. §103 (a), as being unpatentable over Chen and Webster, as applied to claim 1, in view of Mates and Foote. See Office Action, p. 20. Claim 7 is cancelled without prejudice or disclaimer. Applicants respectfully traverse the remaining rejection.

Claim 8 depends from claim 1. As explained above, the cited portions of Chen and Webster do not disclose or suggest at least one element of claim 1. The cited portions of Mates and Foote fail to disclose or suggest the elements of claim 1 not disclosed or suggested by the cited portions of Chen and Webster. For example, the cited portions of Mates fail to disclose or suggest a triggering engine operable to evaluate scene view information to identify which of first information and second information comprises desired information and causing the selector to select and route the identified desired information to a processing engine, as in claim 1. In contrast to claim 1, Mates discloses a plurality of photo detector elements in an integrated circuit, a micro lens array and "image integration circuitry." Mates, col. 2, ll. 55-65, col. 3, ll. 20-25, and col. 4, ll. 30-40. The cited portions of Mates do not disclose or suggest a triggering engine operable to evaluate scene view information to identify which of first information and second information comprises desired information and causing the selector to select and route the identified desired information to a processing engine, as in claim 1.

In further contrast to claim 1, Foote discloses steering a virtual camera to “interesting locations” as determined from sensors that capture audio and motion. Foote discloses image selection based on audio or motion analysis. Foote, col. 4, ll. 5-20. Foote also discloses detecting motion or audio in a particular region and pointing a camera toward the particular region. Foote, col. 12, ll. 10-35, col. 15, ll. 1-10. Foote also discloses combining images of a camera array, storing the combined image in memory, and selecting a part of the combined image for display. Foote, col. 18, ll. 15-22. The cited portions of Foote do not disclose or suggest a triggering engine operable to evaluate scene view information to identify which of first information and second information comprises desired information and causing the selector to select and route the identified desired information to a processing engine, as in claim 1. Therefore, the cited portions of Chen, Webster, Mates, and Foote fail to disclose or suggest at least one element of claim 1, from which claim 8 depends. Hence, claim 8 is allowable.

Claim 9 is Allowable

The Office has rejected claim 9, under 35 U.S.C. §103 (a), as being unpatentable over Chen, Webster, Mates and Foote, in view of Glassman. See Office Action, p. 23. Applicants respectfully traverse the rejection.

Claim 9 depends from claims 1 and 8. As explained above, the cited portions of Chen, Webster, Mates and Foote do not disclose or suggest at least one element of claim 1. The cited portions of Glassman fail to disclose or suggest the elements of claim 1 not disclosed or suggested by the cited portions of Chen, Webster, Mates and Foote. For example, the cited portions of Glassman fail to disclose or suggest a triggering engine operable to evaluate scene view information to identify which of first information and second information comprises desired information and causing the selector to select and route the identified desired information to a processing engine, as in claim 1. In contrast to claim 1, Glassman discloses that both lens and sensor can be formed on a substrate using integrated circuit fabrication techniques. Glassman, col. 10, l. 65-col. 11, l. 5. This is not the same as a triggering engine operable to evaluate scene view information to identify which of first information and second information comprises desired information and causing the selector to select and route the identified desired information to a processing engine, as in claim 1. Therefore, the cited portions of Chen, Webster, Mates, Foote and Glassman fail to disclose or suggest at least one element of claim 1,

from which claim 9 depends. Hence, claim 9 is allowable.

Claims 39-42 are Allowable

Claims 39-42 are allowable, at least by virtue of their dependence on claim 1. Further, the dependent claims recite additional elements not disclosed or suggested by the cited portions of Chen and Webster.

For example, the cited portions of Chen and Webster fail to disclose or suggest wherein the processing engine performs a Pan, Tilt and Zoom operation on the identified desired information, as in claim 41. Chen discloses evaluating an image at different virtual object planes. Webster discloses a lens that can be focused by rotation and integrated with an image sensor in the same package. The cited portions of Chen and Webster fail to disclose or suggest the processing engine performing a Pan, Tilt and Zoom operation on the identified desired information, as in claim 41. For at least this additional reason, claim 41 is allowable.

As a further example, the cited portions of Chen and Webster fail to disclose or suggest wherein the processing engine performs a digital magnification by interpolating between pixels in a center of the desired information, as in claim 42. Chen discloses evaluating an image at different virtual object planes. Webster discloses a lens that can be focused by rotation and integrated with an image sensor in the same package. The cited portions of Chen and Webster fail to disclose or suggest the processing engine performing a digital magnification by interpolating between pixels in a center of the desired information, as in claim 42. For at least this additional reason, claim 42 is allowable.

Claims 43-44 are Allowable

Claims 43-44 are allowable, at least by virtue of their dependence on claim 11. Further, the dependent claims recite additional elements not disclosed or suggested by the cited portions of Chen.

For example, the cited portions of Chen fail to disclose or suggest wherein the first image module has a first depth of focus and the second image module has a second depth of focus and the first image module and the second image module are integrated on an integrated circuit with the processing engine, as in claim 43. Chen discloses emulating various depths of field by way

of a video processor, but the cited portions of Chen do not disclose that two image modules on the same integrated circuit as the processor each have different depths of focus. For at least this additional reason, claim 43 is allowable.

As a further example, the cited portions of Chen fail to disclose or suggest wherein the processing engine evaluates the first image information at the first depth of focus and evaluates the second image information at the second depth of focus to determine which of the first image information and the second image information comprises the desired information, as in claim 44. Chen discloses a processor emulating various depths of field to provide a plurality of virtual images, but the cited portions of Chen do not disclose evaluating first image information at a first depth of focus and evaluating second image information at a second depth of focus to determine which of the first information and the second information comprises the desired information, as in claim 44. For at least this additional reason, claim 44 is allowable.

Claims 45-46 are Allowable

Claims 45-46 are allowable, at least by virtue of their dependence on claim 23. Further, the dependent claims recite additional elements not disclosed or suggested by the cited portions of Chen and Webster.

For example, the cited portions of Chen and Webster fail to disclose or suggest wherein selecting between the first information and the second information comprises performing a digital panning operation on the first information and on the second information, as in claim 45. Chen discloses evaluating an image at different virtual object planes. Webster discloses a lens that can be focused by rotation and integrated with an image sensor in the same package. The cited portions of Chen and Webster fail to disclose or suggest wherein selecting between the first information and the second information comprises performing a digital panning operation on the first information and on the second information, as in claim 45. For at least this additional reason, claim 45 is allowable.

As a further example, the cited portions of Chen and Webster fail to disclose or suggest wherein selecting between the first information and the second information comprises performing a digital tilt operation on the first information and on the second information, as in claim 46. Chen discloses evaluating an image at different virtual object planes. Webster

discloses a lens that can be focused by rotation and integrated with an image sensor in the same package. The cited portions of Chen and Webster fail to disclose or suggest wherein selecting between the first information and the second information comprises performing a digital tilt operation on the first information and on the second information, as in claim 46. For at least this additional reason, claim 46 is allowable.

CONCLUSION

Applicants have pointed out specific features of the claims not disclosed, suggested, or rendered obvious by the cited portions of the cited references as applied in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of each of the rejections, as well as an indication of the allowability of each of the pending claims.

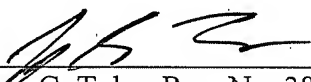
Any changes to the claims in this amendment, which have not been specifically noted to overcome a rejection based upon the cited art, should be considered to have been made for a purpose unrelated to patentability and no estoppel should be deemed to attach thereto.

The Examiner is invited to contact the undersigned attorney at the telephone number listed below if such a call would in any way facilitate allowance of this application.

The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-2469.

Respectfully submitted,

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Date


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